Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte JEFFREY J. FREDBERG and BRUNO LOUIS

Appeal No. 2001-0250
Application No. 08/283,074

HEARD: April 3, 2001

Before BARRETT, FLEMING, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 1-4, 6-12, 15-18, 20-24, 39, 42-46, 54-57, 59-64, 67, 73, 74, 77, 78, 80-83, and 89-91. We affirm-in-part.

BACKGROUND

The invention at issue in this appeal relates to imaging the cross-sectional area of a person's or an animal's airway.

An image of such a cross-sectional area as a function of axial position along the airway conventionally is determined from acoustic reflections measured by an electroacoustic transducer placed in a position remote from the airway opening. The image is called an area-distance function; it is represented by the expression "A(x)," where x is the axial position along the airway. The function helps in diagnosing pathologies associated with oral, pulmonary, and nasal airways. Such pathologies include sleep apnea, asthma, obstructive pulmonary disease, tracheal stenosis, and nasal septum deviation.

The appellants' invention includes a tube with an open end for insertion into an opening (i.e., by a mouth or nostril) in a confined volume. A speaker coupled to the other end of the tube launches acoustical energy into the tube toward the opening to produce an incident wave and a reflected wave to form a wave field. In one embodiment, the acoustical energy is launched into a sidewall of the tube. Pressure-wave-sensing transducers are mounted along the length of the tube in spaced relationship for providing transduced signals representing of the wave field at spaced locations in the

tube. A processor processes the transduced signals to provide an output signal characteristic of the geometry of the volume.

Claim 16, which is representative for our purposes, follows:

> 16. A method for imaging a confined volume comprising,
>
> connecting an open first end of a conduit having an interior free of sound-absorbing or acoustic energy-absorbing material to an opening in said confined volume,
>
> propagating acoustical energy inside said conduit through said open first end and into said confined volume through said opening to produce a first wave traveling towards said opening in said confined volume and the confined volume producing a second wave traveling away from said opening towards said second end in response to the first wave, the second wave having a wave field in said conduit representative of said confined volume geometry,
>
> transducing acoustic wave field parameters of said wave field at least two spaced locations along said conduit to provide first and second transduced signals representative of said wave field,
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> and processing said first and second transduced signals in accordance with an algorithm that takes into account said first wave and said second wave to provide an output signal representative of a characteristic of said confined volume.

The references relied on in rejecting the claims follow:

Fredberg et al. (Fredberg) 5,882,314 Mar. 16, 1999 (filed Dec. 17, 1991)

Schroeder, Determination of the Geometry of the Human Vocal Tract by Acoustic Measurements, 41 Journal of the Acoustical Soc'y. of America 1002-10 (1967)

Seybert et al. (Seybert), Experimental Determination of Acoustic Properties using a Two-Microphone Random-Excitation Technique 1362-70 (1976).[1]

Claims 17, 42-46, 74, 77, 78, 80, and 91 stand rejected under 35 U.S.C. § 112, ¶ 2, as indefinite. Claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 stand rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-4, 6-12, and 16-19 of Fredberg.[2] Claims 18 and 73 stand rejected under the doctrine of obviousness-type double patenting as

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[1] No journal name was provided.

[2] Although the examiner provisionally rejected these claims over claims 2-5, 7-13, 18-22, and 67 of Application Serial No. 07/808,907 ('907 Application), (Examiner's Answer at 4), the issuance of the '907 Application as the Fredberg patent converted the provisional rejection into a non-provisional rejection. Furthermore, claims 2-5, 7-13, and 18-22 of the '907 Application were renumbered as claims 1-4, 6-12, and 16-19 of Fredberg, and no claim 67 was found in the '907 Application.

unpatentable over claims 16 and 12, respectively, of Fredberg.[3] Claims 1, 7, 10, 12, 15, 16, 18, 21, 23, 39, 67, 89, and 91 stand rejected under 35 U.S.C. § 102(b) as anticipated by Seybert. Claims 11, 22, and 90 stand rejected under 35 U.S.C. § 103 as obvious over Seybert. Claims 2-4, 6, 17, and 81-83 stand rejected under § 103 as obvious over Seybert in view of Schroeder. Rather than repeat the arguments of the appellants or examiner in toto, we refer the reader to the briefs and answer for the respective details thereof.

OPINION

In deciding this appeal, we considered the subject matter on appeal and the rejections by the examiner. Furthermore, we duly considered the arguments and evidence of the appellants and examiner. After considering the record, we are persuaded

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[3] Although the examiner provisionally rejected these claims over claims 18 and 13 of the '907 Application, (Examiner's Answer at 4), the issuance thereof as the Fredberg patent converted the provisional rejection into a non-provisional rejection. Furthermore, claims 18 and 13 of the '907 Application were renumbered as claims 16 and 12 of Fredberg.

that the examiner erred in rejecting claims 17, 42-46, 74, 77, 78, 80, and 91 as indefinite; in rejecting claims 1, 7, 10, 12, 15, 16, 18, 21, 23, 39, 67, 89, and 91 as anticipated by Seybert; and in rejecting claims 11, 22, and 90 as obvious over Seybert. We are not persuaded that he erred in rejecting claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 as claiming the same invention as that of claims 1-4, 6-12, and 16-19 of Fredberg; in rejecting claims 18 and 73 as unpatentable over claims 16 and 12 of Fredberg; or in rejecting claims 2-4, 6, 17, and 81-83 as obvious over Seybert in

view of Schroeder. Accordingly, we affirm-in-part. Our opinion addresses the following rejections:

- indefiniteness rejection of claims 17, 42-46, 74, 77, 78, 80, and 91
- double patenting rejection of claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 and obviousness-type double patenting rejection of claims 18 and 73
- anticipation rejection of claims 1, 7, 10, 12, 15, 16, 18, 21, 23, 39, 67, 89, and 91 and obviousness rejection of claims 2-4, 6, 11, 17, 22, 81-83, and 90.

We begin with the indefiniteness rejection.

I. Indefiniteness Rejection of Claims 17, 42-46, 74, 77, 78, 80, and 91

We begin by noting the following principles. "The test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. If the claim read in light of the specification reasonably apprise[s] those skilled in the art of the scope of the invention, Section 112 demands no more." Miles Labs., Inc. v. Shandon Inc., 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993) (internal citations omitted). Furthermore, a claim should not be denied "solely because of the type of language used to define the subject matter for which patent protection is sought." In re Swinehart, 439 F.2d 210, 212 n.4, 169 USPQ 226, 228 n.4 (CCPA 1971). With these principles in mind, we consider the examiner's rejections and the appellants' arguments.

Regarding claim 17, the examiner alleges, "[c]laim 17 sets forth a result 'is produced...' instead of an active method step of 'producing' ...." (Examiner's Answer at 3) The appellants argue, "claim 17 is definite and clearly and

distinctly points out the subject matter applicants regard as there [sic] invention ...." (Appeal Br. at 17.)

Claim 17 specifies the following limitations: "[a] method in accordance with claim 12 wherein said processing step produces said output signal to represent cross-sectional area of said confined volume as a function of distance from said opening in said confined volume." The claim omits the language that the examiner rejected, viz., "is produced." Therefore, we reverse the rejection of claim 17 as indefinite.

Regarding claims 42-46, the examiner alleges, "[d]etails of the airway are not structural limitations on the apparatus." The appellants argue, "claims 42-46 ... are definite and clearly and distinctly points [sic] out the subject matter applicants regard as there [sic] invention ...." (Appeal Br. at 17.)

Independent claim 39 specifies in pertinent part the following limitations: "[a]pparatus for providing an output

signal characteristic of a confined volume geometry comprising, a conduit for exchanging acoustical energy with said confined volume ...." Dependent claims 42, 43, 44, 45, and 46 further specify in pertinent part that the confined volume comprises "an airway of an animal[,]" "an airway of a human[,]" "a pulmonary airway[,]" "a nasal airway[,]" or "an oral airway[,]" respectively.

In short, claim 39 recites an apparatus for providing an output signal characteristic of a confined volume geometry. Furthermore, one skilled in the art would understand that claims 42-46 further limit the confined volume of claim 39 to an animal airway, a human airway, a pulmonary airway, a nasal airway, or an oral airway, respectively. Therefore, we reverse the rejection of claims 42-46 as indefinite.

Regarding claims 74, 77, 78, and 91, the examiner alleges that the claims "only inferentially include 'a second end of the conduit'." (Examiner's Answer at 3.) Similarly regarding claim 77, he alleges that the claim "only inferentially includes the 'sidewall of the conduit'." (Id.) The

appellants argue, "claims 74, 78 and 91 ... is [sic] definite and clearly and distinctly points [sic] out the subject matter applicants regard as there [sic] invention ...." (Appeal Br. at 17.) They further argue, "claim 77 ... is definite and clearly and distinctly points [sic] out the subject matter applicants regard as there [sic] invention ...." (Id. at 17-18.)

Claims 74 and 78 specify in pertinent part the following limitations: "the conduit is formed with a second end ...." Similarly, claim 91 specifies in pertinent part the following limitations: "a second end of the conduit ...." Claim 77 specifies in pertinent part the following limitations: "a sidewall of the conduit ...."

One skilled in the art would understand that claims 74, 78, and 91 require a second end of a conduit while claim 77 requires a sidewall thereof. Therefore, we reverse the rejection of claims 74, 77, 78, and 91 as indefinite.

Regarding claim 80, the examiner alleges that the claim "fails to provide that any structure is capable of producing or in any way is related 'an impulse response'." (Examiner's Answer at 10.) The appellants argue, "claim 80 is definite and clearly and distinctly points out the subject matter applicants regard as there [sic] invention ...." (Appeal Br. at 18.)

Claim 80 specifies in pertinent part the following limitations: a processor means coupled to said plurality of pressure-wave-sensing transducers for processing said first and second transduced signals produced in response to the incident wave, the reflected wave and any reflected wave from the second end to provide a signal representative of an impulse response of the geometry and to provide said output signal characteristic of said confined volume geometry ...." One skilled in the art would understand that claim 80 recites a processor means that provides a signal representing an impulse response of a geometry. Therefore, we reverse the rejection of claim 80 as indefinite. We proceed to the double patenting and obviousness-type double patenting rejections.

II. Double Patenting Rejection of Claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 and Obviousness-Type Double Patenting Rejection of Claims 18 and 73

The appellants argue that the double patenting rejection "is a provisional double patenting rejection since the conflicting claims have not in fact been patented." (Appeal Br. at 18.) They also argue that the obviousness-type double patenting rejection "is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented." (Id.) Although the rejections were provisional, the issuance of the '907 Application as the Fredberg patent converted the rejections into non-provisional rejections. See M.P.E.P. § 804.I.B (7th ed., July 1998).

Rather than contesting the rejections at oral hearing, moreover, the appellants' representative merely stated his intent to file a terminal disclaimer. Therefore, we affirm the double patenting rejection of claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 and the obviousness-type double patenting

rejection of claims 18 and 73 pro forma.[4] We proceed to the anticipation and obviousness rejections.

III. Anticipation Rejection of Claims 1, 7, 10, 12, 15, 16, 18, 21, 23, 39, 67, 89, and 91 and Obviousness Rejection of claims 2-4, 6, 11, 17, 22, 81-83, and 90

We begin by noting the following principles from Rowe v. Dror, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997).

> A prior art reference anticipates a claim only if the reference discloses, either expressly or inherently, every limitation of the claim. See Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "[A]bsence from the reference of any claimed element negates anticipation." Kloster Speedsteel AB v. Crucible, Inc., 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

We also note the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

> In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is

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[4] Of course, a terminal disclaimer cannot be used to overcome a 35 U.S.C. § 101 statutory double patenting rejection. See M.P.E.P. § 804.02 (7th ed. July 1998).

> established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

The references represent the level of ordinary skill in the art. See In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995)(finding that the Board of Patent Appeals and Interference did not err in concluding that the level of ordinary skill was best determined by the references of record); In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("[T]he PTO usually must evaluate ... the level of ordinary skill solely on the cold words of the literature."). Of course, "'[e]very patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that [which is] disclosed ....'" In re Bode, 550 F.2d 656, 660, 193 USPQ 12,
16 (CCPA 1977) (quoting In re Wiggins, 488 F.2d 538, 543, 179 USPQ 421, 424 (CCPA 1973)). Those persons "must be presumed to know something" about the art "apart from what the references disclose." In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). With these principles in mind, we

address the examiner's rejection and the appellants' arguments regarding the following claims:

- claims 1-4, 6, 7, 10-12, 17, 18, 21, 22, 81-83, and 89-91
- claims 15 and 16
- claims 23, 39, and 67.

A. Claims 1-4, 6, 7, 10-12, 17, 18, 21, 22, 81-83, and 89-91

The examiner alleges, "[a] confined volume geometry characterizing apparatus/method of the type claimed is shown in Fig.3 and described in the second column of page 1365 to the first column of page 1366 of the Seybert et al publication." (Examiner's Answer at 5.) He adds, "Schroeder discloses the use of an acoustic impedance measuring device/method for determining the geometry of a human airway ...." (Id. at 6-7.) The appellants argue, "all claims ... include a processor means for, or the step of, producing an output signal representative of the cross-sectional area of said confined volume as a function of distance from said opening in said confined volume and a processor or processing step for producing such an output signal is not described in the Seybert et al reference." (Appeal Br. at 13.)

"In the patentability context, claims are to be given their broadest reasonable interpretations. Moreover, limitations are not to be read into the claims from the specification." In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claims 1-4, 6, 7, 10 and 11 specify in pertinent part the following limitations: "said processor means provides as said output signal an area signal that is characteristic of crosssectional area of said confined volume as a function of the distance from said opening in said confined volume." Similarly, claims 12 and 17 specify in pertinent part the following limitations: "processing said transduced parameters to provide an output signal representative of said confined volume, wherein said confined volume is characterized by cross-sectional area as a function of distance from said opening in said confined volume and said output signal is representative of cross-sectional area of said confined volume as a function of distance from said opening in said confined volume." Also similarly, claims 18, 21, and 22 specify in

pertinent part the following limitations: "a processor means coupled to said plurality of pressure-wave-sensing transducers for processing said first and second transduced signals to provide said output signal characteristic of said confined volume geometry, wherein said confined volume is characterized by cross-sectional area as a function of distance from said opening in said confined volume and said processor means provides as said output signal an area signal that is characteristic of cross-sectional area of said confined volume as a function of distance from said opening in said confined volume ...."

Further similarly, claims 81-83, 89, and 90, by virtue of their dependence from claim 80, specify in pertinent part the following limitations: "a processor means coupled to said plurality of pressure-wave-sensing transducers for processing said first and second transduced signals produced in response to the incident wave, the reflected wave and any reflected wave from the second end to provide a signal representative of an impulse response of the geometry and to provide said output signal characteristic of said confined volume geometry,

wherein said confined volume is characterized by cross--sectional area as a function of distance from said opening in said confined volume and said processor means provides as said output signal an area signal that is characteristic of cross--sectional area of said confined volume as a function of distance from said opening in said confined volume." In addition, claim 91 specifies in pertinent part the following limitations: "processing said transduced parameters produced in response to the incident wave, the reflected wave and any reflected wave from a second end of the conduit to provide a signal representative of an impulse response of the confined volume and providing said output signal characteristic of said confined volume geometry and providing an output signal representative of said confined volume geometry, wherein said confined volume is characterized by cross-sectional area as a function of distance from said opening in said confined volume and said output signal is representative of cross-sectional area of said confined volume as a function of distance from said opening in said confined volume." Giving claims 1-4, 6, 7, 10-12, 17, 18, 21, 22, 81-83, and 89-91 their broadest reasonable interpretation, the limitations recite producing a

signal representing the cross-sectional area of a confined volume as a function of distance from an opening therein.

The examiner fails to show a teaching or suggestion of the limitations in Seybert alone. Although the reference discloses producing a variety of signals representing the cross-sectional area of a confined volume, viz., "power reflection coefficient, phase angle between incident and reflected waves ... and resistive and reactive impedance," p. 1367, and "transmission loss," id., none of these signals are a function of distance from an opening in the confined volume. To the contrary, Figures 5-9 of the reference show that the signals are a function of frequency.

Because Seybert's signals are a function of frequency, we are not persuaded that the reference discloses or would have suggested the aforementioned limitations. Therefore, we reverse the rejection of claims 1, 7, 10, 12, 18, 21, 89, and 91 as anticipated by, and of claims 11, 22, and 90 as obvious over, Seybert.

The combination of references, however, would have suggested the limitations. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986)(citing In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)). In determining obviousness, a reference "must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole." Id., 231 USPQ at 380.

Here, the rejection is based on a combination of Seybert and Schroeder. As explained to the appellants' representative at oral hearing, the latter reference teaches producing a signal representing the cross-sectional area of a confined volume as a function of distance from an opening therein. Specifically, Schroeder discloses producing "the area function of a vowel sound ... and the corresponding band-limited ... logarithmic area function." P. 1008. Figure 6 of the reference, moreover, shows that the two functions are functions of a distance between a person's glottis and lips.

Because Schroeder teaches producing the area function of a vowel sound and the corresponding band-limited logarithmic area function, both of which are functions of the distance between the glottis and lips, we are persuaded that the teachings of Seybert and Schroeder in combination with the prior art as a whole would have suggested the aforementioned limitations. Therefore, we affirm the rejection of claims 2-4, 6, 17, and 81-83 as obvious over Seybert in view of Schroeder. We next address claims 15 and 16.

B. Claims 15 and 16

The examiner asserts, "[a] confined volume geometry characterizing apparatus/method of the type claimed is shown in Fig.3 and described in the second column of page 1365 to the first column of page 1366 of the Seybert et al publication." (Examiner's Answer at 5.) The appellants argue, "[a]ll claims in Group I include a processor means, or processing step, for, or of, producing an output signal characteristic of the geometry of said volume and such an

output signal is not described in the Seybert et al reference." (Appeal Br. at 10.)

Claim 15 specifies in pertinent part the following limitations: "a processor means coupled to said plurality of pressure-wave-sensing transducers including means for processing said first and second transduced signals in accordance with an algorithm that takes into account said first wave and said second wave to provide said output signal characteristic of said confined volume geometry." Similarly, claim 16 specifies in pertinent part the following limitations: "processing said first and second transduced signals in accordance with an algorithm that takes into account said first wave and said second wave to provide an output signal representative of a characteristic of said confined volume." Giving claims 15 and 16 their broadest reasonable interpretation, the limitations merely recite producing a signal representing the cross-sectional area of a confined volume.

Seybert teaches the limitations by producing signals representing the cross-sectional area of "a pipe of length 4 in.[,]" p. 1367, "an open tube of length 7.5 in.[,]" p. 1368, and "a prototype automotive muffler." p. 1369. Specifically, Figure 5 shows the reflection coefficient and phase angle for the pipe and Figure 6 shows the corresponding input impedance. Similarly, Figure 7 depicts the reflection coefficient and phase angle for the tube and Figure 8 shows the corresponding input impedance. Figure 9 displays the reflection coefficient and transmission loss of the muffler.

Because the signals shown in Figures 5-9 represent the cross-sectional area of a confined volume, we are not persuaded that the reference discloses the aforementioned limitations. Therefore, we affirm the rejection of claims 15 and 16 as anticipated by Seybert. We next address claims 23, 39, and 67.

C. Claims 23, 39, and 67

The examiner alleges, "Fig.3 of the Seybert et al reference clearly shows the mounting of the transducers in the sidewall of the tube." (Examiner's Answer at 8.) The

appellants argue, "such claims point out that the launching transducer is coupled to the sidewall ...." (Reply Br. at 2.)

Claim 23 specifies in pertinent part the following limitations: "a launching transducer coupled to the sidewall to launch acoustical energy through the sidewall of said conduit ...." Similarly, claim 39 specifies in pertinent part the following limitations: "a launching transducer coupled to said conduit for launching acoustical energy through the sidewall of said conduit ...." Also similarly, claim 67 specifies in pertinent part the following limitations: "a launching transducer coupled to launch acoustical energy through the sidewall ...." Giving claims 23, 39, and 67 their broadest reasonable interpretation, the limitations recite a transducer for launch acoustical energy through a sidewall of a conduit.

The examiner fails to show a teaching of the limitations in Seybert. Although the reference discloses microphones coupled to the sidewall of a steel tube, the microphones do

not launch acoustical energy let alone launch acoustical energy through the sidewall. The microphones are "used to measure the sound pressure at two points in the tube." P. 1366. One of ordinary skill in the art would know that microphones do not launch acoustical energy. To the contrary, microphones receive such energy and convert it to electrical signals.

Because Seybert's microphones do not launch acoustical energy, we are not persuaded that the reference discloses the aforementioned limitations. Therefore, we reverse the rejection of claims 23, 39, and 67 as anticipated by Seybert.

We end by noting that our affirmance is based only on the arguments made in the briefs. Arguments not made therein are not before us, are not at issue, and are considered waived.

CONCLUSION

In summary, the rejection of claims 17, 42-46, 74, 77, 78, 80, and 91 under 35 U.S.C. § 112; the rejection of claims 1, 7, 10, 12, 15, 16, 18, 21, 23, 39, 67, 89, and 91 under 35 U.S.C. § 102(b); and the rejection of claims 11, 22, and 90 under 35 U.S.C. § 103 are reversed. The rejections of claims 1-4, 6-12, 17, 20-24, 54-57, and 59-64 under 35 U.S.C. § 101; the rejection of claims 18 and 73 under the doctrine of obviousness-type double patenting; and the rejection of claims 2-4, 6, 17, and 81-83 under § 103, however, are affirmed.

No period or time for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

LEE E. BARRETT Administrative Patent Judge	)
MICHAEL R. FLEMING Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
LANCE LEONARD BARRY Administrative Patent Judge	)

LLB/kis

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